

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application:

Listing of Claims

Claim 1 (Currently Amended): An image search method of searching for a desired image from a plurality of images stored in storage means, comprising:

a designation step of designating an ~~arbitral~~ arbitrary region in a search source image;

a segmenting step of segmenting the search source image into a plurality of segmented regions;

a first calculating step of calculating, for each of the plurality of segmented regions, a ratio of a size of the designated arbitrary region included in the segmented region to a size of said arbitrary region;

~~a setting step of setting a weight value in units~~ for each of the plurality of segmented regions obtained by segmenting the search source image into a plurality of segmented regions, based on a each ratio calculated in the first calculating step of a size of the designated arbitral region included in the segmented region to a size of said segmented region, wherein the weight value increases as the ratio increases;

a second calculation step of dividing calculating image similarity between the search source image and each of the plurality of images stored in the storage means ~~into by~~ comparing the plurality of segmented regions of the search source image and segmented regions of each of the plurality of images stored in the storage means, performing similarity calculation in units of the segmented regions, using the weight value ~~values~~ set in the setting step, ~~to obtain weighted similarity for each of the segmented regions between the designated~~

~~search source image and each of the plurality of images stored in the storage means, and calculating image similarity between the search source image and each of the plurality of images on the basis of the calculated weighted similarity for each of the segmented regions; and~~

an acquisition step of acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated in the second calculation step.

Claim 2 (Canceled).

Claim 3 (Original): The method according to claim 1, wherein said method further comprises the drawing step of allowing an operator to interactively draw an image, and

the search source image is the image drawn in the drawing step.

Claim 4 (Canceled).

Claim 5 (Currently Amended): The method according to claim 1, wherein the second calculation step comprises a step of integrating the weighted similarities for the segmented regions to obtain the image similarity.

Claims 6-7 (Canceled).

Claim 8 (Currently Amended): The method according to claim 1, further comprising a display step of displaying on a display screen an image representing the image acquired in the acquisition step as the search result.

Claim 9 (Original): The method according to claim 8, wherein the display step comprises displaying a thumbnail image of the image acquired in the acquisition step.

Claim 10 (Original): The method according to claim 8, wherein the display step comprises displaying an icon image corresponding to the image acquired in the acquisition step.

Claim 11 (Original): The method according to claim 8, wherein the display comprises, when one of displayed images is selected, displaying details of an image linked to the image.

Claim 12 (Original): The method according to claim 8, wherein the display step comprises displaying extracted images in an order of similarities.

Claims 13-15 (Canceled).

Claim 16 (Currently Amended): An image search apparatus for searching for a desired image from a plurality of images stored in storage means, comprising:

a designating means for designating an ~~arbitral~~ arbitrary region in a search source image;

a segmenting means for segmenting the search source image into a plurality of segmented regions;

a first calculating means for calculating, for each of the plurality of segmented regions, a ratio of a size of the designated arbitrary region included in the segmented region to a size of said arbitrary region;

a setting means for setting a weight value ~~in units~~ for each of the plurality of segmented regions obtained by segmenting the search source image into a plurality of segmented regions, based on a each ratio calculated by the first calculating means of a size of the designated arbitral region included in the segmented region to a size of said segmented region, wherein the weight value increases as the ratio increases;

a second calculation means for ~~dividing~~ calculating image similarity between the search source image and each of the plurality of images stored in the storage means ~~into~~ by comparing the plurality of segmented regions of the search source image and segmented regions of each of the plurality of images stored in the storage means ~~, performing similarity calculation in units of the segmented regions,~~ using the weighted ~~value~~ values set in the setting means, ~~to obtain weighted similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means, and calculating image similarity between the search source image and each of the plurality of images on the basis of the calculated weighted similarity for each of the segmented regions; and~~

an acquisition means for acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated by said second calculation means.

Claim 17 (Canceled).

Claim 18 (Original): The apparatus according to claim 16, wherein

said apparatus further comprises drawing means for allowing an operator to interactively draw an image, and

the search source image is the image drawn by said drawing means.

Claim 19 (Canceled).

Claim 20 (Currently Amended): The apparatus according to claim 16, wherein said second calculation means integrates the weighted similarities for the segmented regions to obtain the image similarity.

Claims 21-22 (Canceled).

Claim 23 (Currently Amended): The apparatus according to claim 16, further comprising display means for displaying on a display screen an image representing the image acquired by said acquisition means as the search result.

Claim 24 (Original): The apparatus according to claim 23, wherein said display means displays a thumbnail image of the image acquired by said acquisition means.

Claim 25 (Original): The apparatus according to claim 23, wherein said display means displays an icon image corresponding to the image acquired by said acquisition means.

Claim 26 (Original): The apparatus according to claim 23, wherein when one of displayed images is selected, said display means displays details of an image linked to the image.

Claim 27 (Original): The apparatus according to claim 23, wherein said display means displays extracted images in an order of similarities.

Claims 28-30 (Canceled).

Claim 31 (Currently Amended): A storage medium which stores a control program for causing a computer to realize processing of searching for a desired image from a plurality of images stored in storage means, said control program comprising:

a code of a designating step of designating an ~~arbitrary~~ arbitrary region in a search source image;

a code of a segmenting step of segmenting the search source image into a plurality of segmented regions;

a code of a first calculating step of calculating, for each of the plurality of segmented regions, a ratio of a size of the designated arbitrary region included in the segmented region to a size of said arbitrary region;

a code of a setting step of setting a weight value ~~in units~~ for each of the plurality of segmented regions obtained by segmenting the search source image into a plurality of segmented regions, based on a each ratio calculated in the first calculating step of a size of the designated arbitral region included in the segmented region to a size of said segmented region, wherein the weight value ~~increases as the ratio increases~~;

a code of a second calculation step of dividing calculating image similarity between the search source image and each of the plurality of images stored in the storage means ~~into~~ by comparing the plurality of segmented regions of the search source image and segmented regions of each of the plurality of images stored in the storage means, performing similarity calculation in units of the segmented regions, using the weight value values set in the setting step, ~~to obtain weighted similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means, and calculating image similarity between the search source image and each of the plurality of images on the basis of the calculated weighted similarity for each of the segmented regions;~~ and

a code of an acquisition step of acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated in the second calculation step.

Claim 32 (Previously presented): The method according to claim 1, wherein in the setting step, the weight value for each segmented region is set based on a ratio of the designated arbitral region to the segmented region.

Claim 33 (Previously presented): The apparatus according to claim 16, wherein said setting means sets the weight value for each segmented region based on the ratio of the designated arbitral region to the segmented region.

Claim 34 (Currently Amended): An image search apparatus for searching for a desired image from a plurality of images stored in a storage unit, comprising:

a designation unit configured to designate an ~~arbitral~~ arbitrary region in a search source image;

a segmenting unit configured to segment the search source image into a plurality of segmented regions;

a first calculating unit configured to calculate, for each of the plurality of segmented regions, a ratio of a size of the designated arbitrary region included in the segmented regions to a size of said arbitrary region;

a setting unit configured to set a weight value ~~in units~~ for each of the plurality of segmented regions obtained by segmenting the search source image into a plurality of segmented regions, based on a each ratio calculated by the first calculating unit of a size of the arbitral region to a size of the segmented region, wherein the weight value increases as the ratio increases;

a second calculation unit configured to divide calculate image similarity between the search source image and each of the plurality of images stored in the storage unit into by comparing the plurality of segmented regions of the search source image and segmented regions of each of the plurality of images stored in the storage means , perform similarity calculation in units of the segmented regions, using the weighted value values set in the setting unit, to obtain weighted similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage unit, and calculate image similarity between the search source image and each of the plurality of

~~images on the basis of the calculated weighted similarity for each of the segmented regions;~~
and

an acquisition unit configured to acquire an image as a search result from the plurality of images on the basis of the image similarity calculated by said second calculation unit.